

Diabetes and Amputation Prevention

Overview

Diabetes-related lower limb/foot complications are a major (and largely preventable) cause of illness, disability, and health system costs in Canada. Diabetes is the leading cause of non-traumatic lower limb amputation in Canada, with foot ulcers preceding 85% of cases.^{1,2,3} Amputations continue to occur not because prevention strategies are unknown, but because evidence-based foot care, early intervention, and coordinated services are not consistently accessible or delivered, particularly for those already facing social and geographic disadvantage.

Burden & Impact



Each year (2020–2023), approximately **7,720 hospitalizations** were related to diabetes-associated lower-limb amputations, including **3,080 leg amputations**, alongside **23,500 hospitalizations** for ulcers, gangrene, or infection.⁴



These hospitalizations cost the health system roughly **\$750 million annually**, representing only a portion of total direct and indirect costs.⁴



A single leg amputation hospitalization averages **19 days** in hospital and **~\$47,000 per stay**, with high risks of readmission and in-hospital mortality.⁴



Adults with diabetes are over **20 times** more likely to undergo non-traumatic lower-limb amputation than those without diabetes.^{1,2,3}



Diabetic foot ulcer admissions are among the **costliest inpatient conditions**, exceeding costs for other diabetes complications and the top five general internal medicine diagnoses.⁵

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Equity and High-Risk Populations

- Men, adults aged 40–64, and specifically those aged 50+ experience disproportionately high amputation rates.^{4,6,7,8}
- Higher risk is observed among people living in lower-income, socially deprived, rural, and remote communities.^{4,7}
- Indigenous populations and individuals with significant comorbidities (renal failure, hypertension, congestive heart failure) face elevated risk.^{6,8,9}
- Low continuity of care and limited access to preventive services substantially increase post-amputation hospitalizations and emergency visits.⁸

Evidence on Prevention and Models of Care



Approximately 80% of diabetes-related leg amputations are preventable with timely, evidence-based care.⁴



Effective prevention includes regular foot screening, early identification of neuropathy and vascular disease, callus care, protective footwear, patient education, and rapid access to multidisciplinary wound care.¹⁰



Jurisdictions using multidisciplinary models (e.g., Alberta’s “Toe and Flow” model) demonstrate lower major amputation rates and a shift toward limb-preserving minor procedures.¹¹



National and provincial trend analyses show declines in major amputations and mortality, but rising minor amputations, particularly among younger adults; indicating missed opportunities for earlier prevention.¹²

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Gaps in the Current System

Despite strong evidence between the association of diabetes and lower limb/foot complications, people with diabetes continue to face barriers to effective prevention and care. These gaps include:

- Limited access for low income, rural, and remote populations
- Lack of public coverage for key preventive services and devices
- Inadequate foot screening with reference to clinical guidelines
- Insufficient system support for providers to deliver evidence based care
- Poor coordination and communication across care teams
- Lack of equitable care

Diabetes Canada Recommendation

Diabetes Canada calls for:



Affordable, timely access to medications, devices, education, and care to prevent complications.



Publicly funded foot care services and devices, including education, therapeutic footwear, and specialist care.



Routine screening and annual foot examinations, with more frequent assessments for high risk individuals, aligned with Clinical Practice Guidelines.



Interdisciplinary, coordinated care models to prevent and manage foot complications.



Daily self foot checks by people living with diabetes to identify early signs of injury or infection.

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Key Message

Diabetes-related foot complications and amputations impose a substantial and avoidable burden on individuals and the health system. Strengthening publicly funded preventive services, improving care coordination, and expanding multidisciplinary models are key to reducing amputations and improving diabetes care across Canada.

Citations:

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